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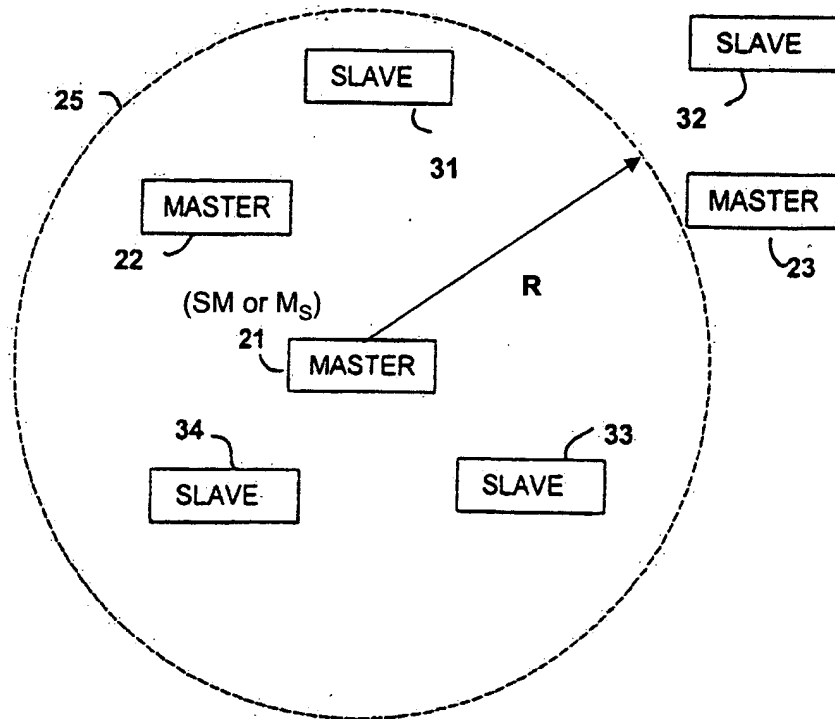
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FIG. 1



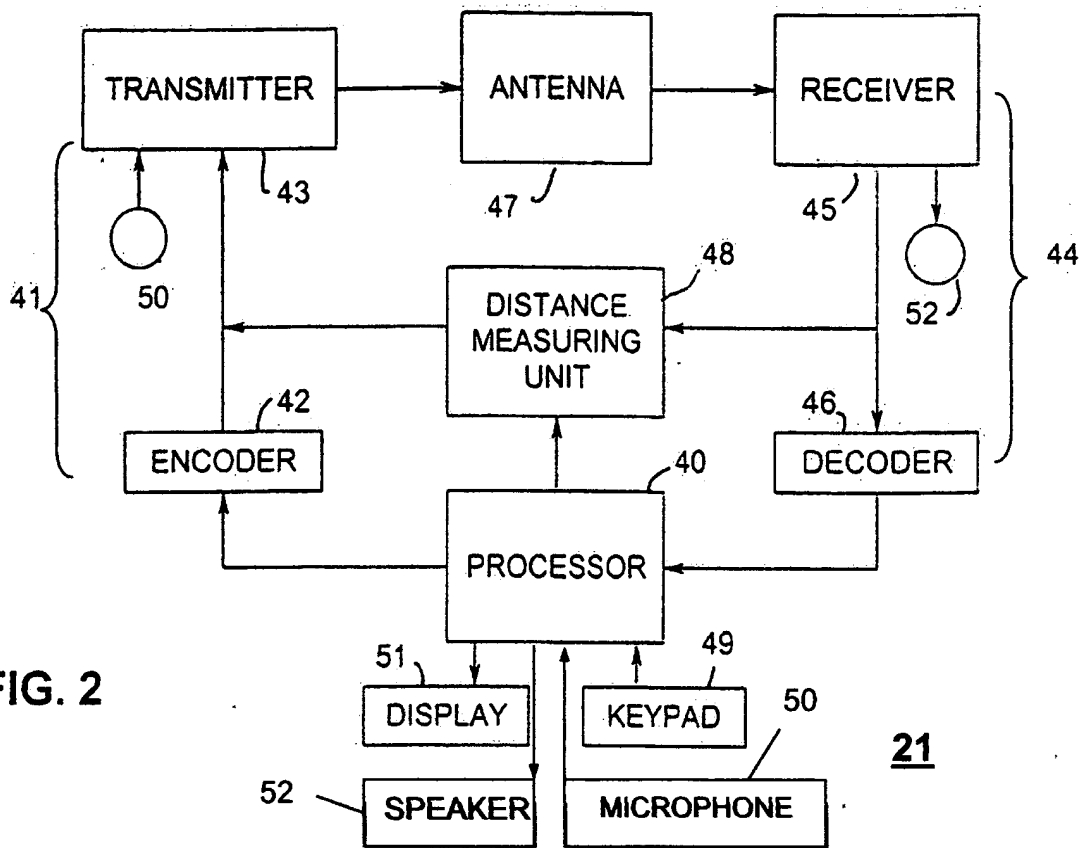


FIG. 2

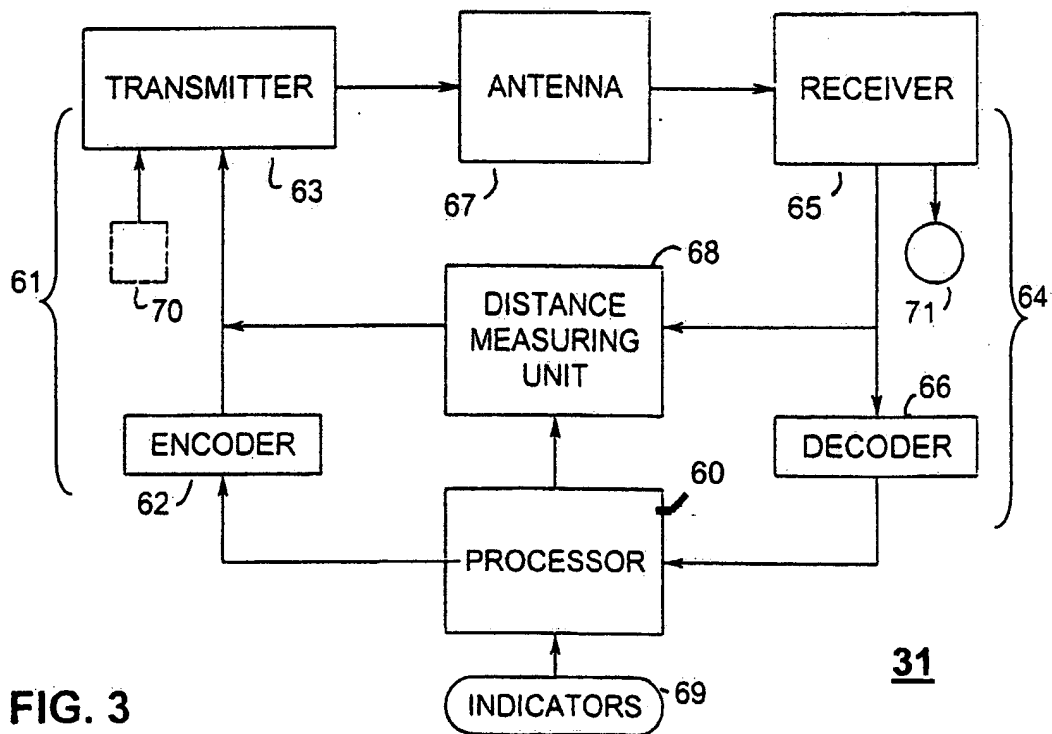


FIG. 3

FIG. 2A

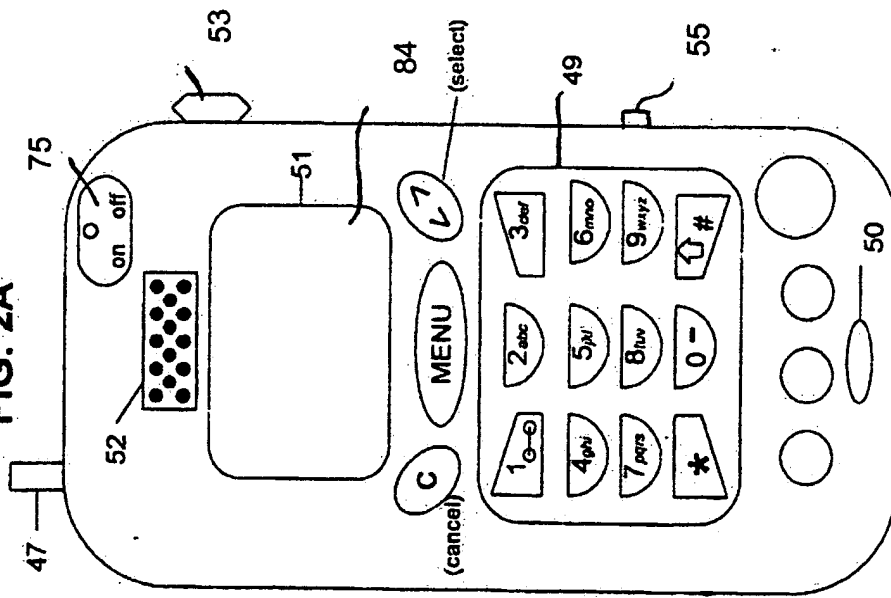
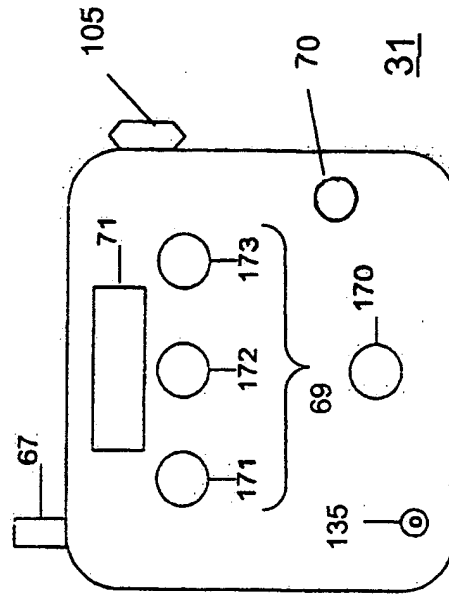


FIG. 3A



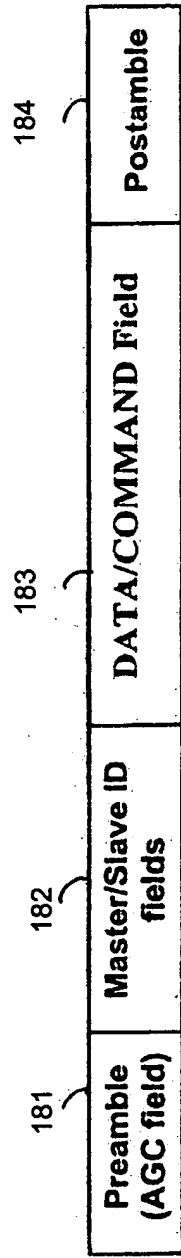


FIG. 3B

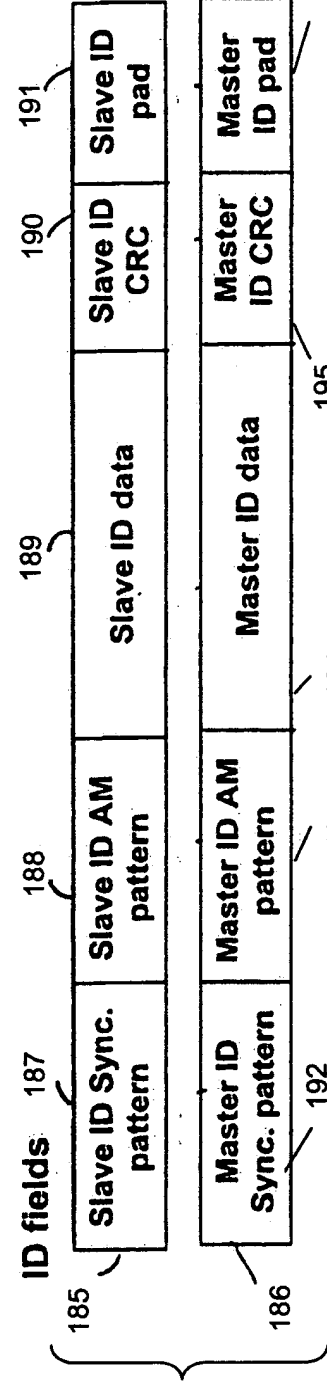


FIG. 3C

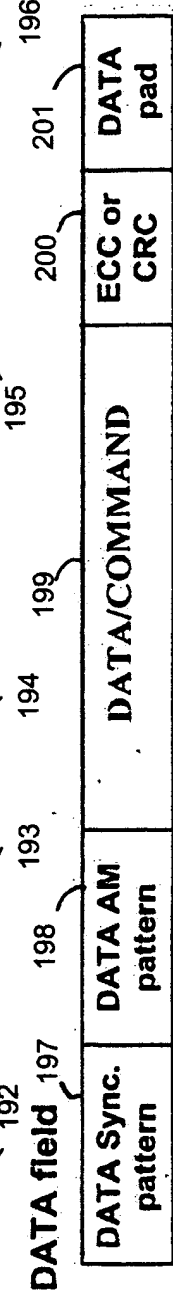


FIG. 3D

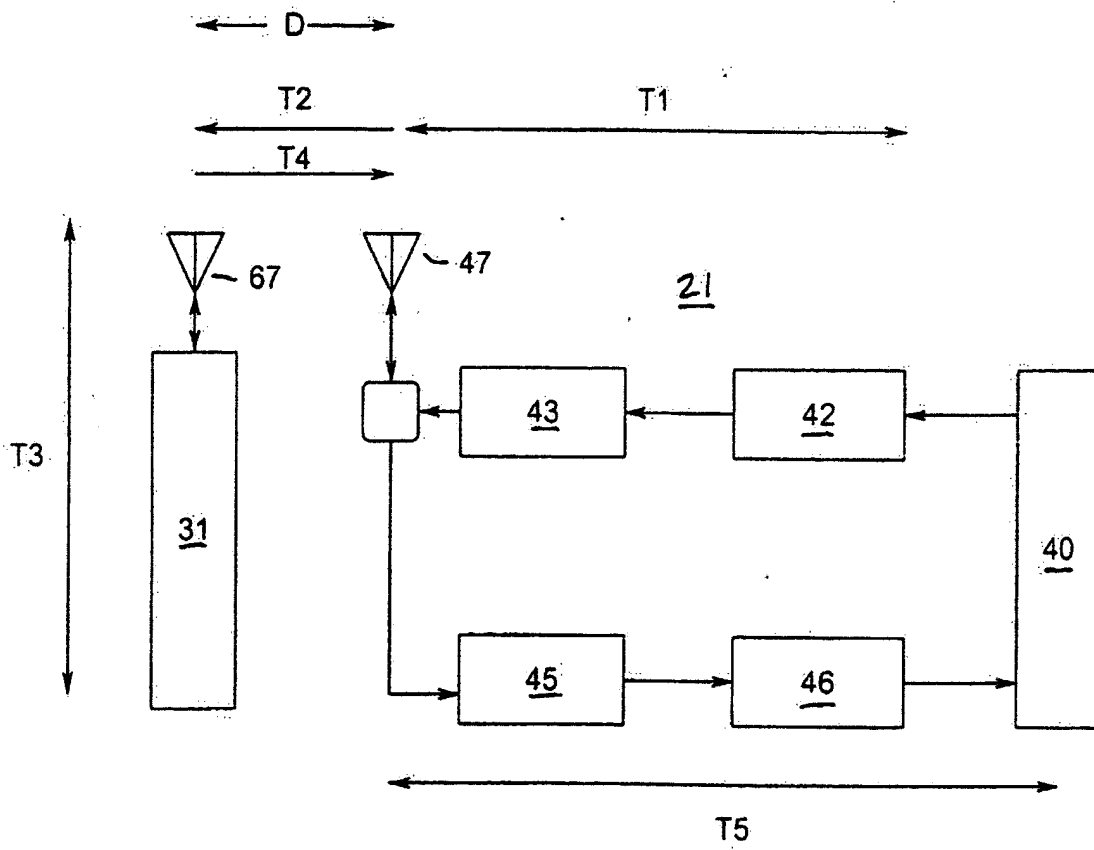


FIG. 4

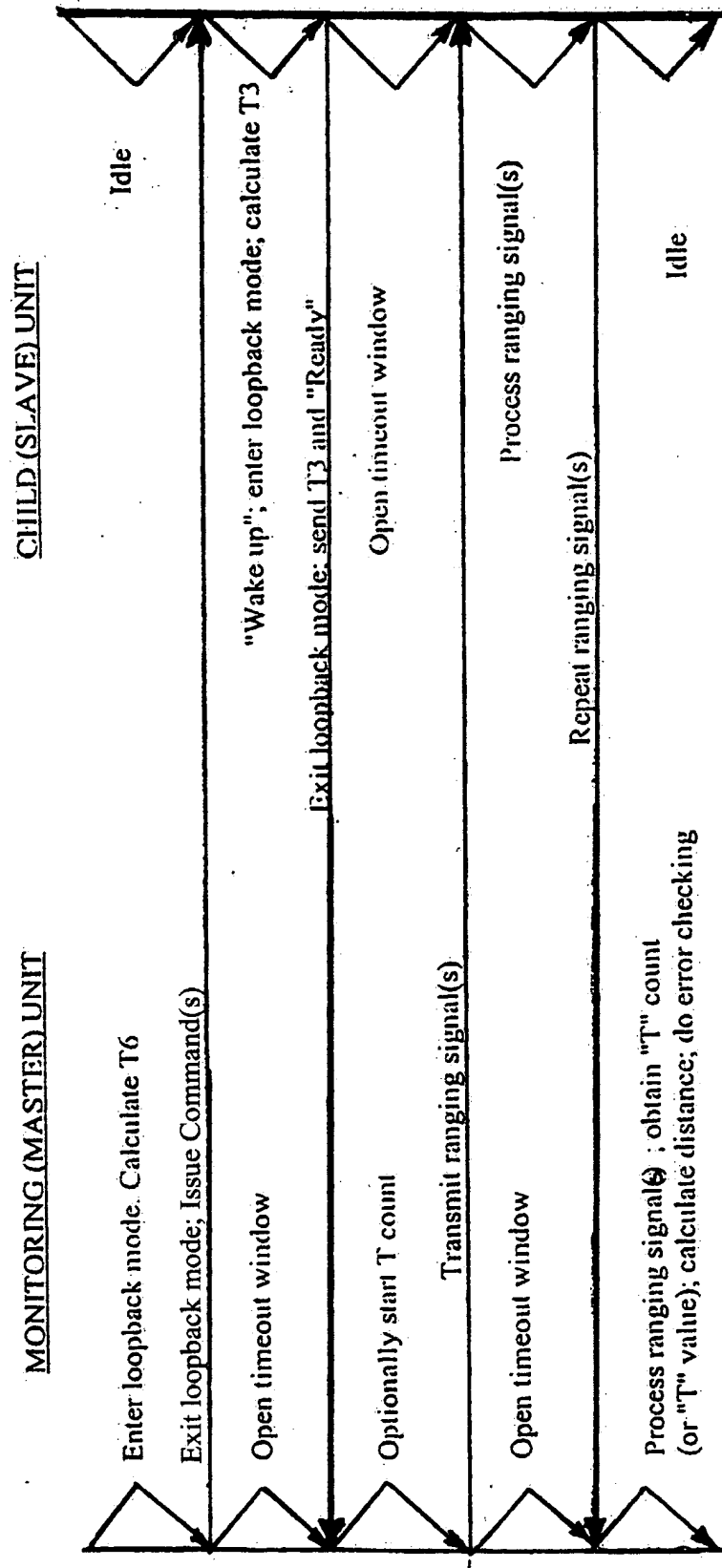
FIG. 4A**DISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 1**

FIG. 4B

DISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 2

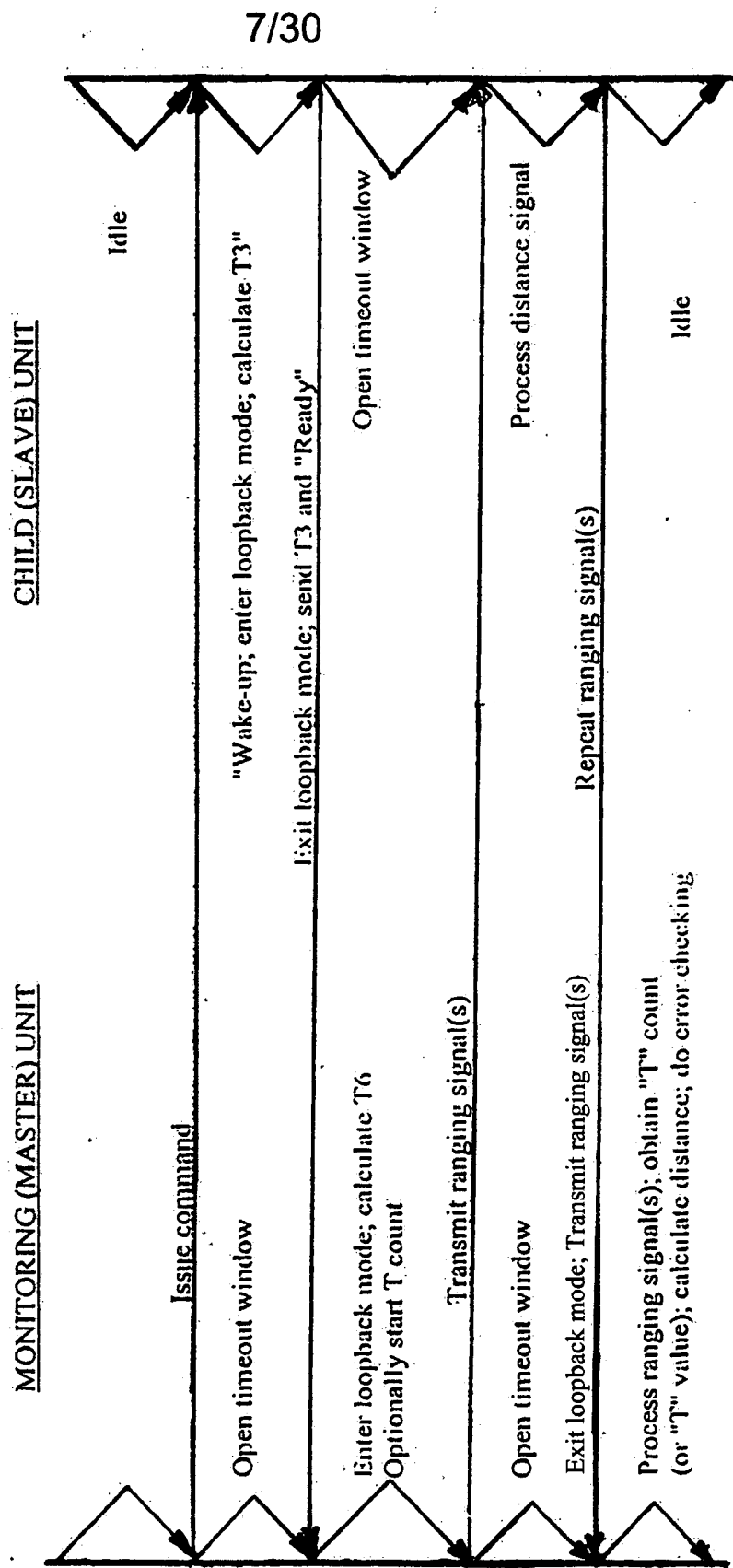


FIG. 5

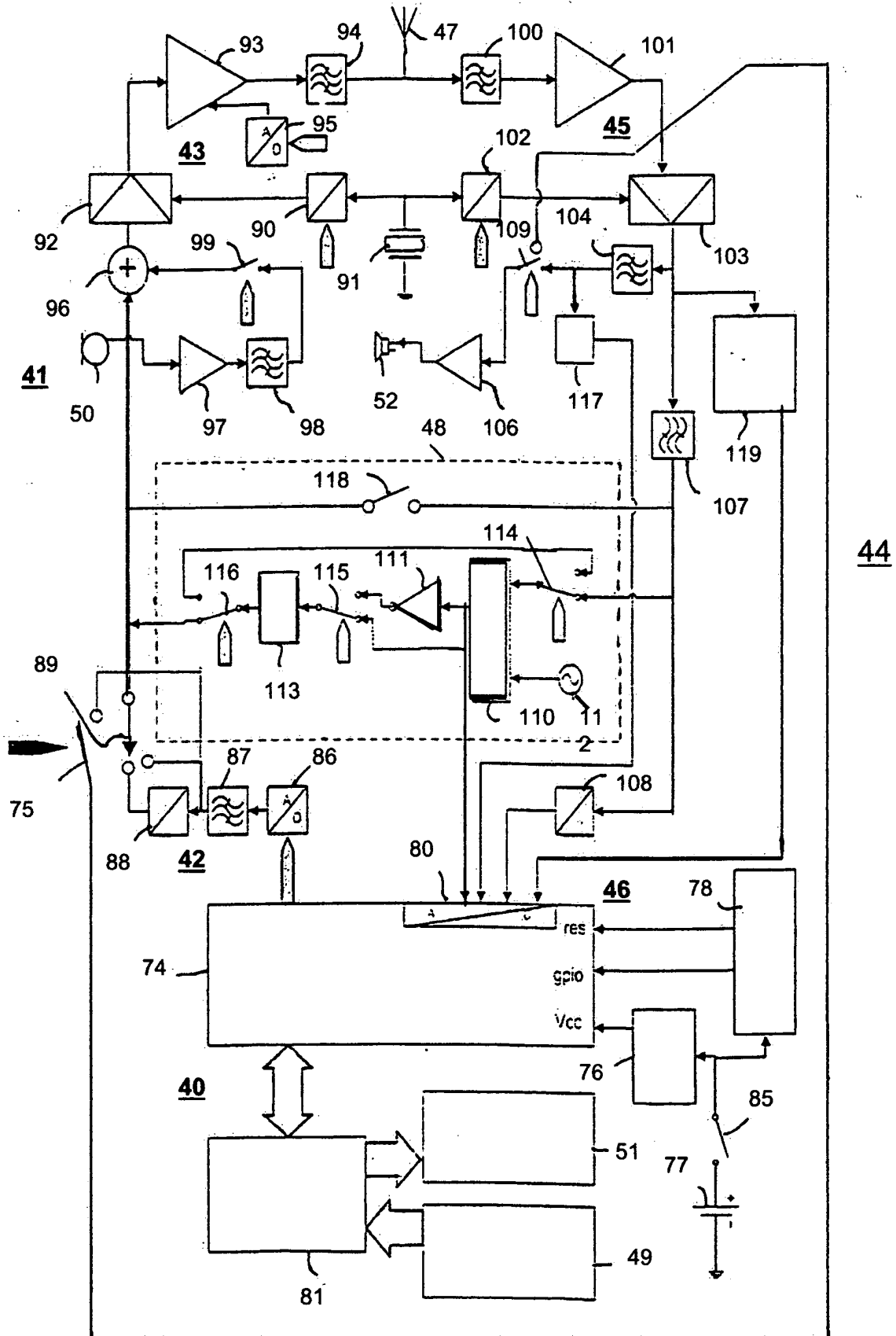
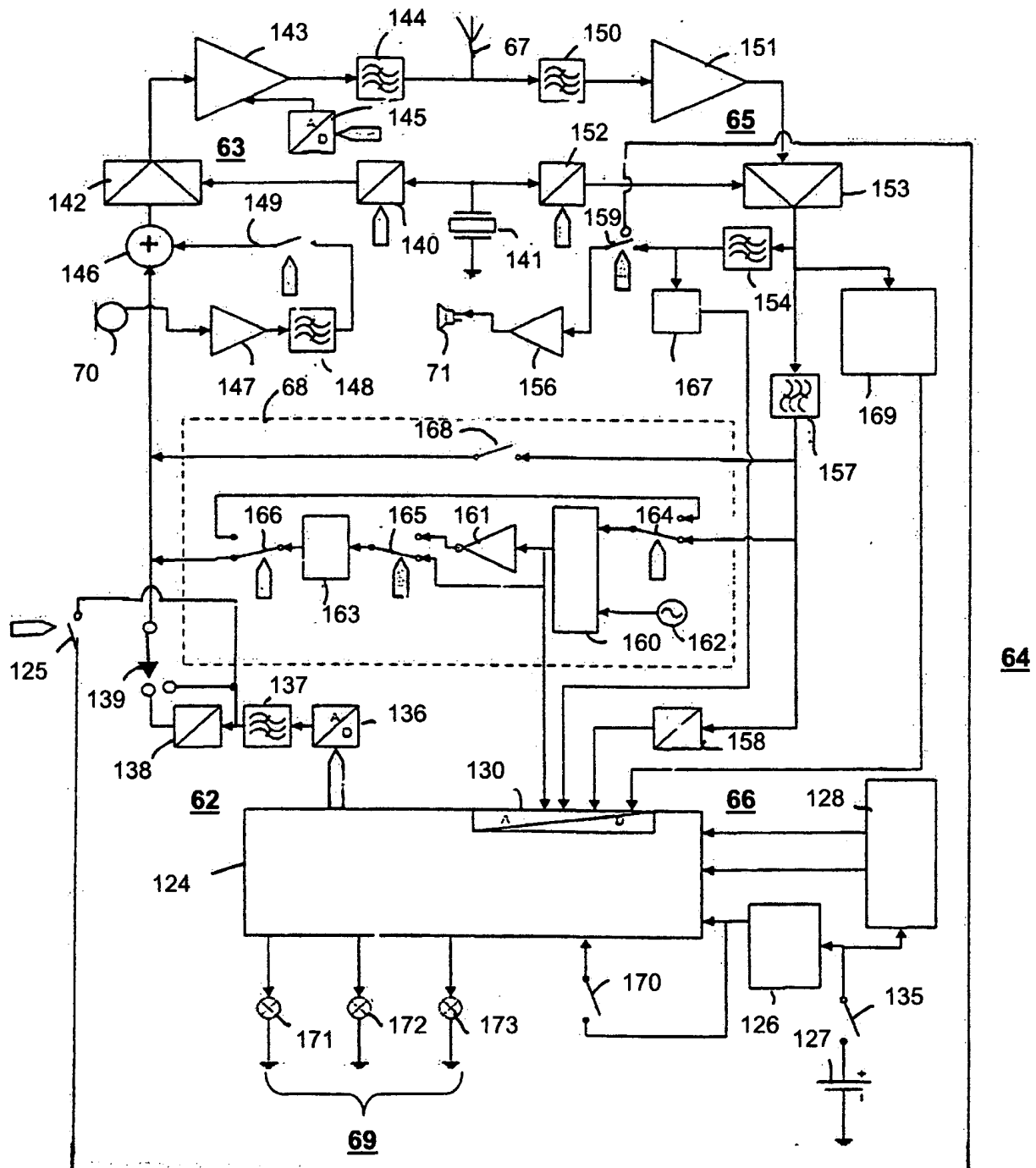


FIG. 6A



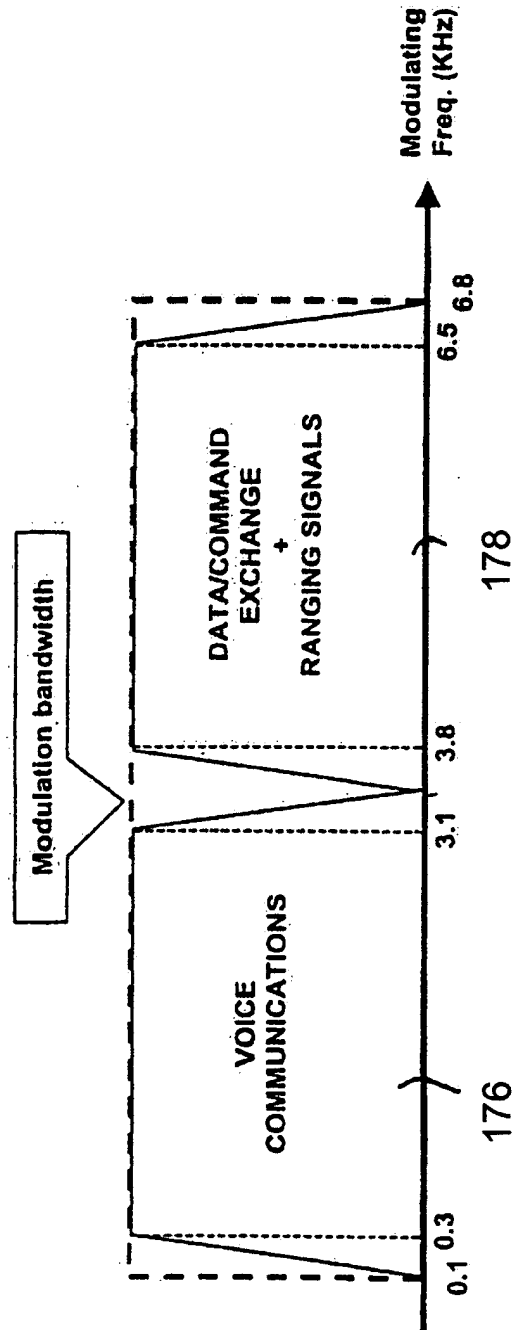


FIG. 6B

Position determination example

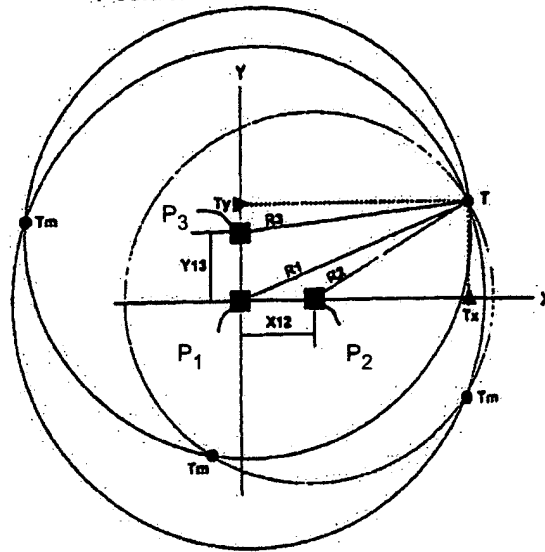


FIG. 7

Position determination ambiguity

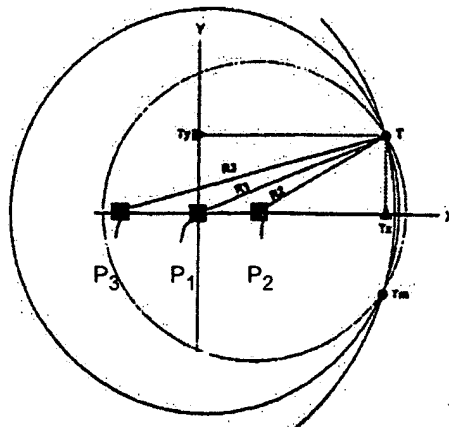


FIG. 8

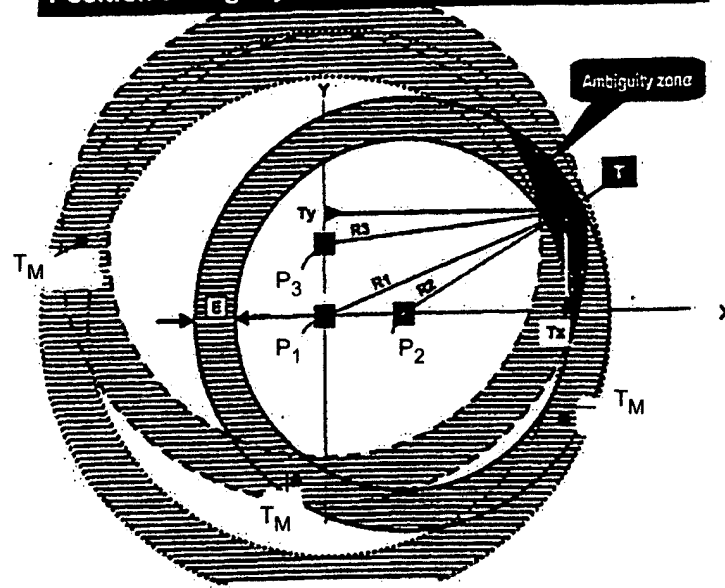
Position ambiguity and distance measurement error

FIG. 9

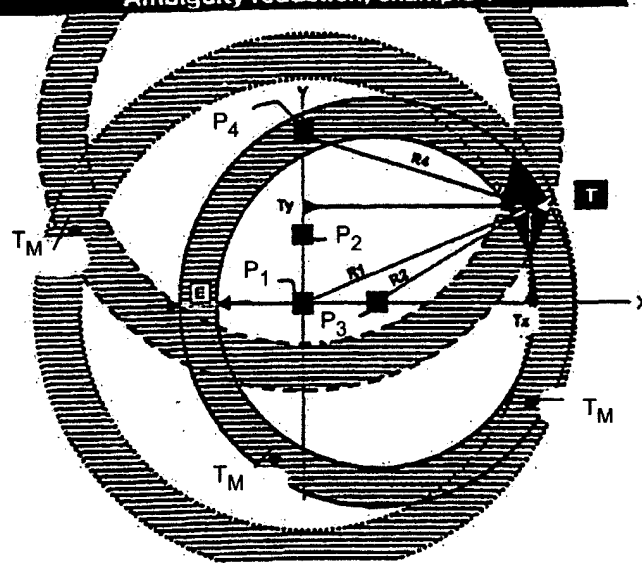
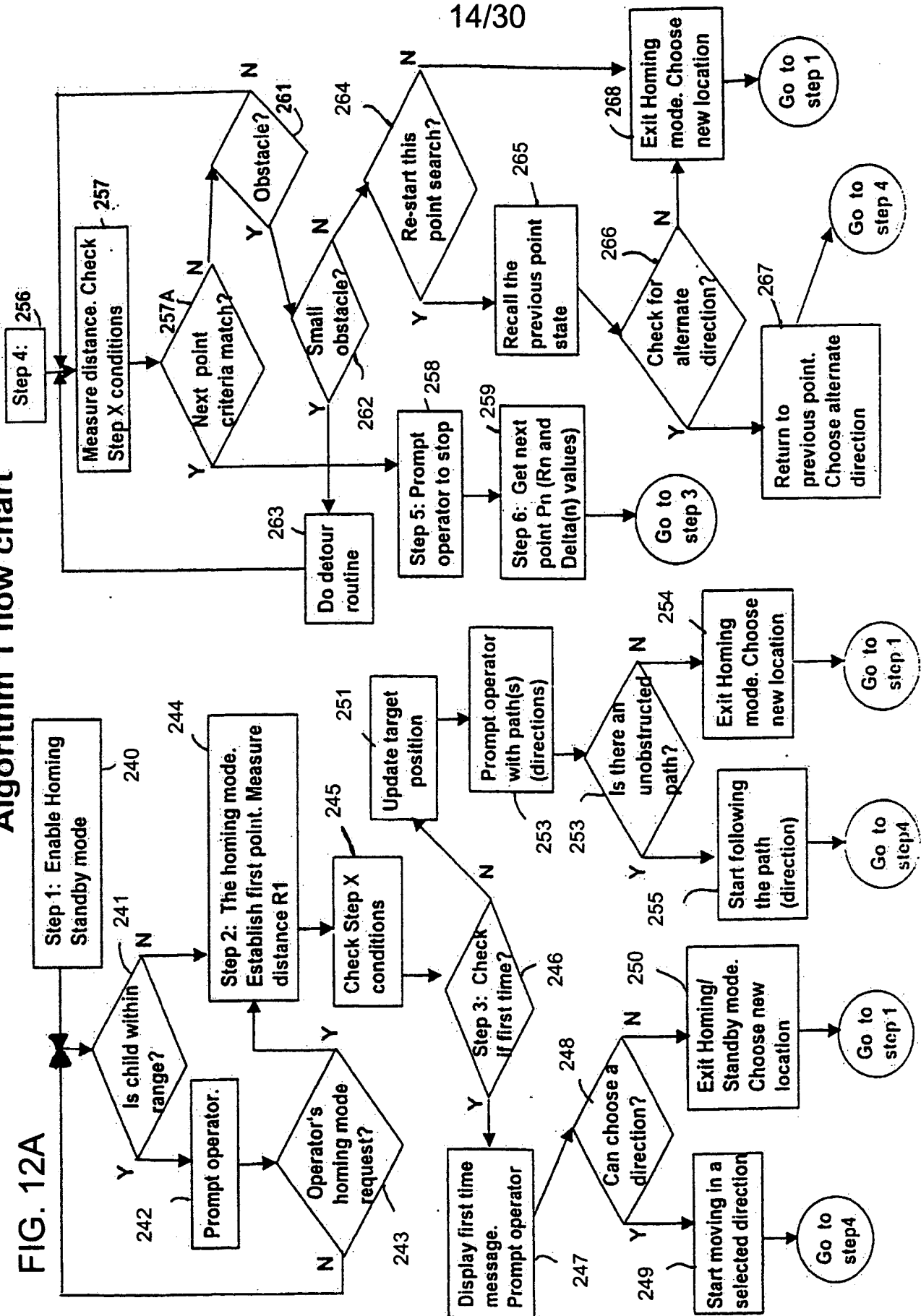
Ambiguity reduction, example 1

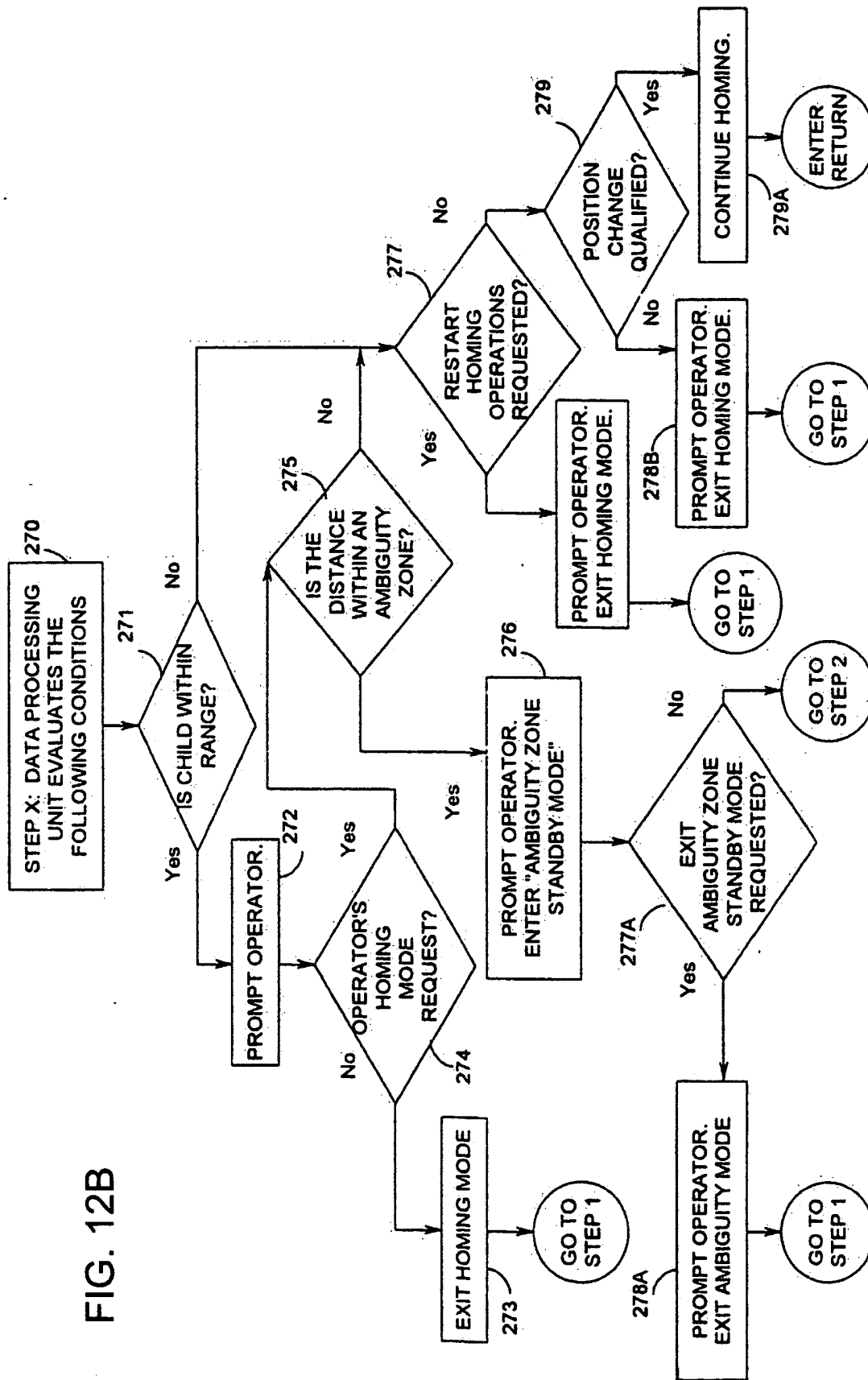
FIG. 10

FIG. 12A

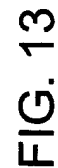
Algorithm 1 flow chart



ALGORITHM 1 FLOW CHART, CONTINUED



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Algorithm 3 flow chart

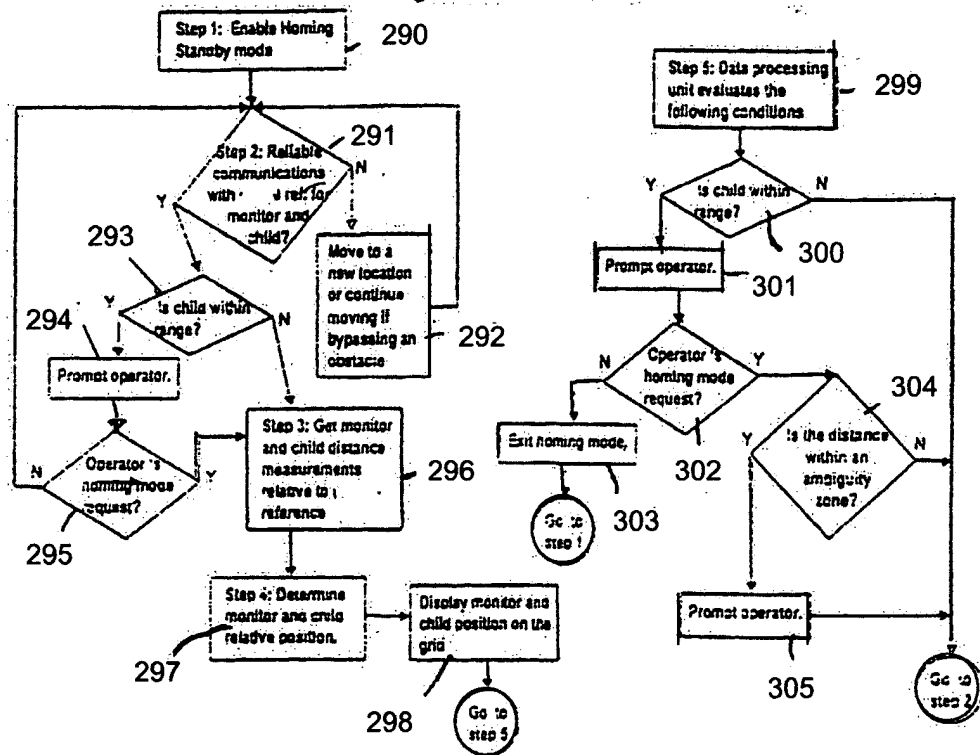


FIG. 14

Algorithm 1 homing

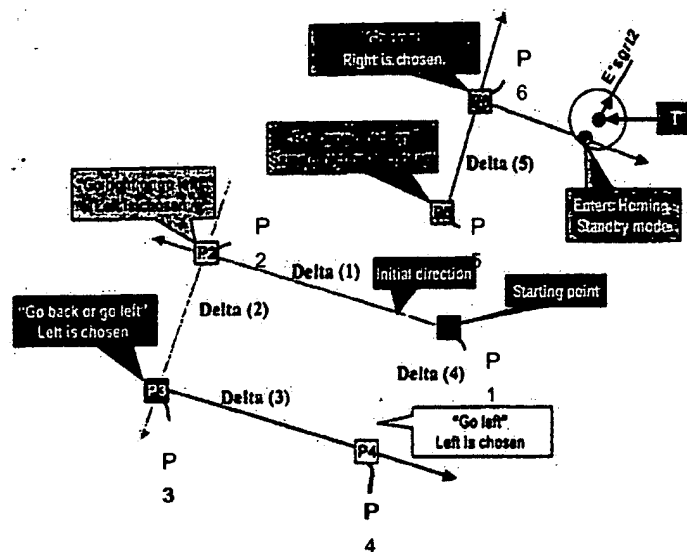


FIG. 15

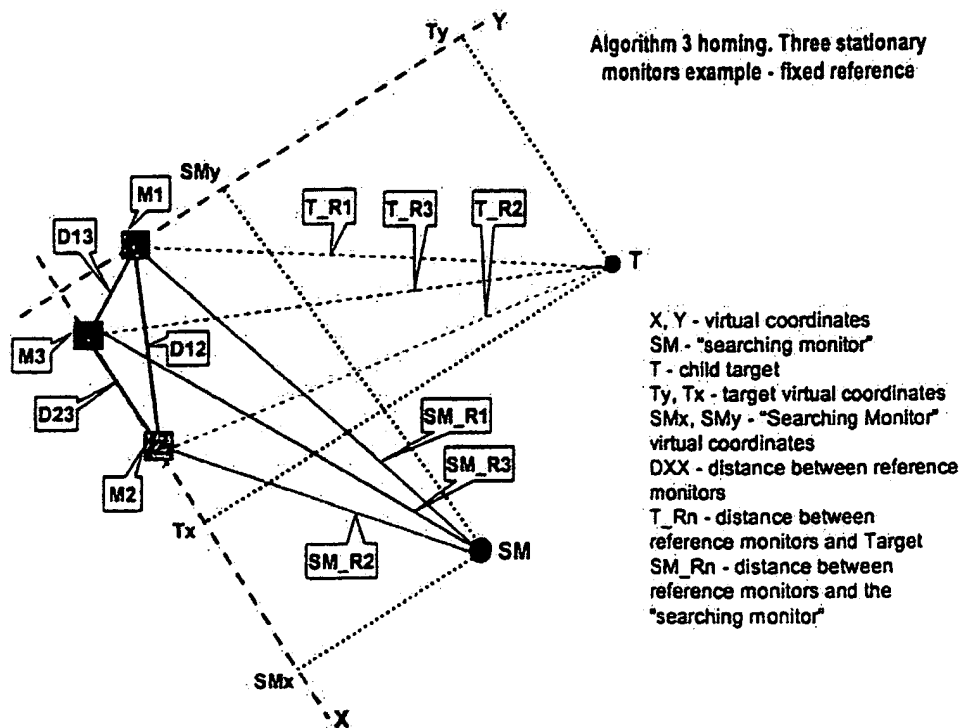


FIG. 16

Algorithm 3 homing. Three stationary monitors reference example, continued
(virtual coordinates are rotated for mapping into display grid)

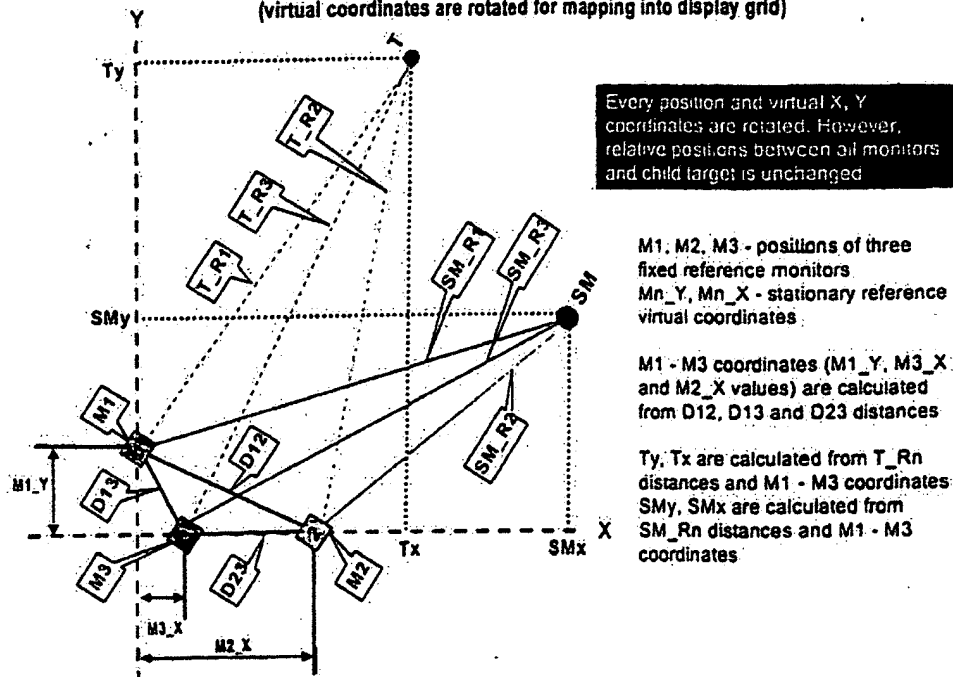


FIG. 17

Algorithm 3 homing. Three stationary monitors reference example, continued
(display grid)

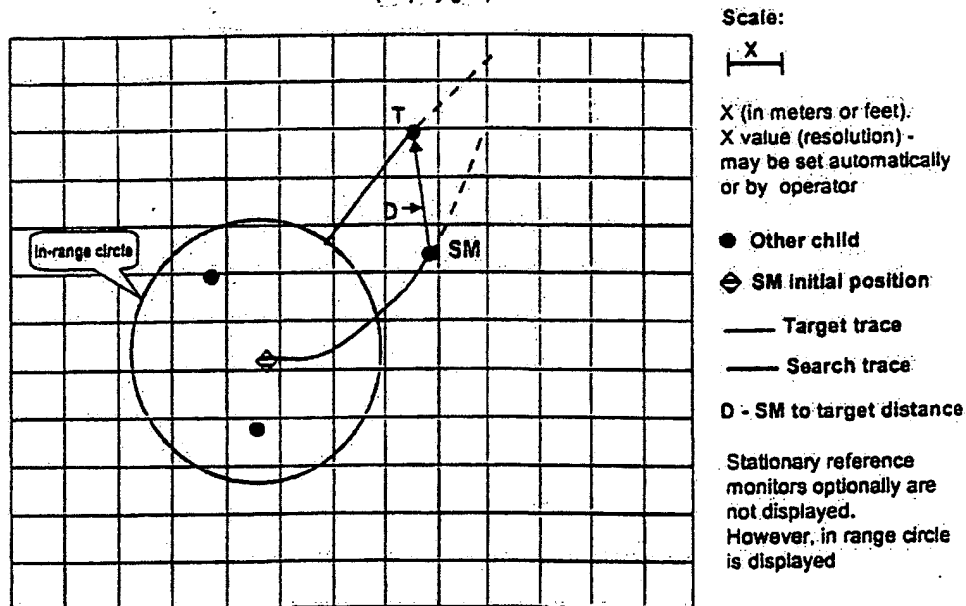


FIG. 18

Algorithm 3 homing. Three moving monitors reference example,
(display grid)

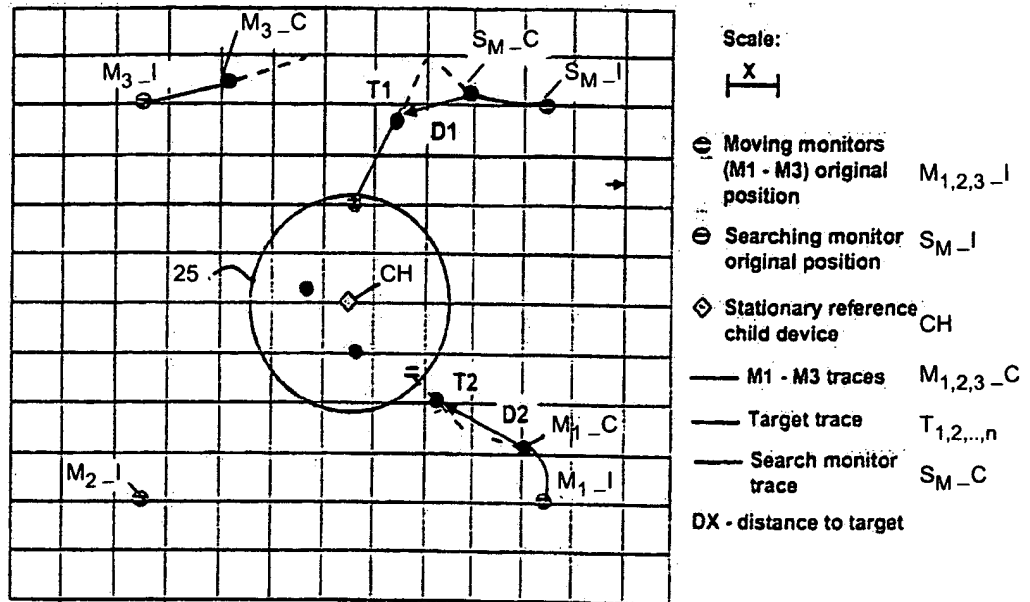
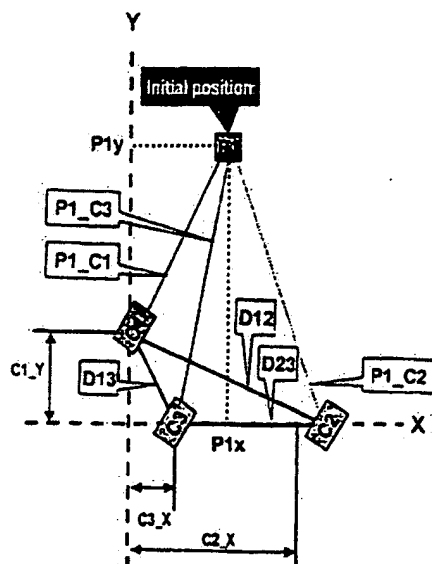


FIG. 19

Algorithm 2 homing. Three stationary child devices reference example
(virtual coordinates are rotated)



Every position and virtual X, Y coordinates are rotated. However, relative positions between all reference child devices searching monitor and target is unchanged

X, Y - virtual coordinates
C1, C2, C3 - positions of three stationary child reference monitors

Ck_Y, Ck_X - fixed child reference virtual coordinates are calculated from D12, D13 and D23 values

Pny, Prix are calculated from Pn_Ck distances and C1-C3 coordinates

FIG. 20

Algorithm 2 homing. Three stationary child devices reference example, continued

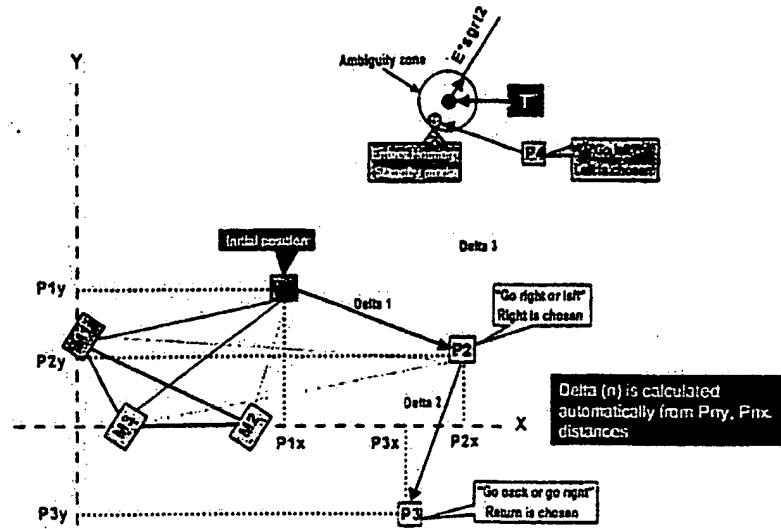


FIG. 21

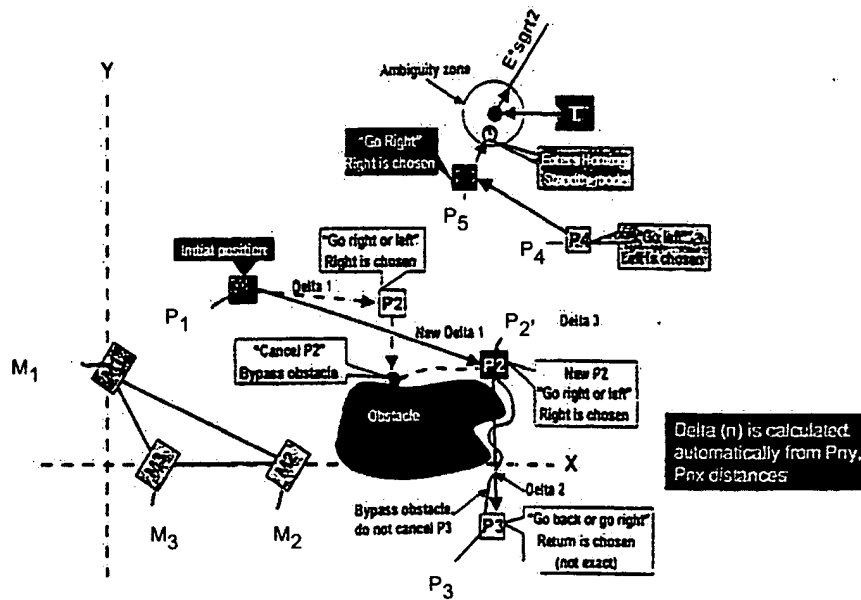
Algorithm 2 homing. Three stationary child devices reference example, continued
(obstacle avoidance/bypassing)

FIG. 22

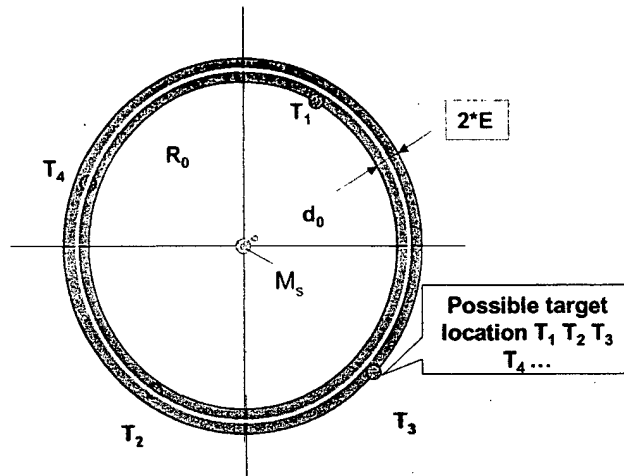


FIG. 23

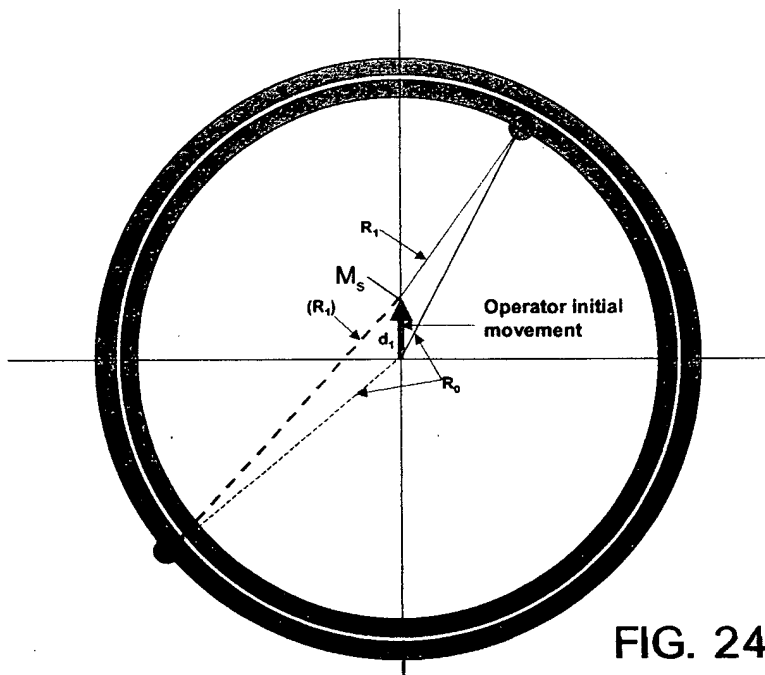


FIG. 24

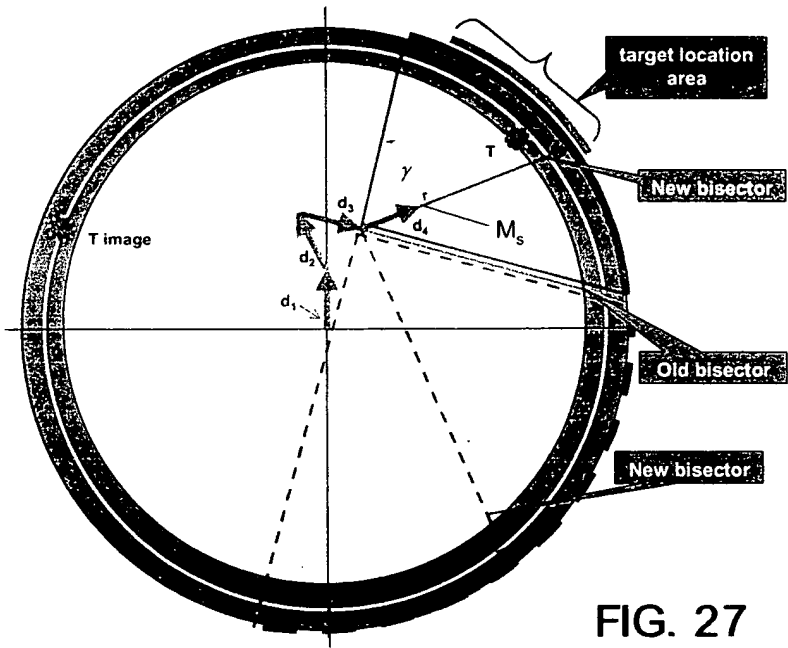


FIG. 27

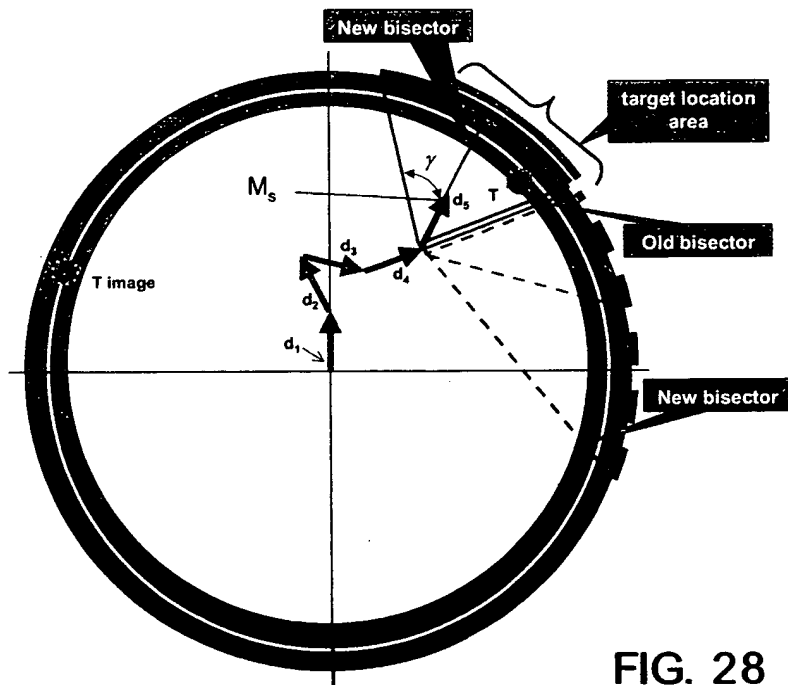


FIG. 28

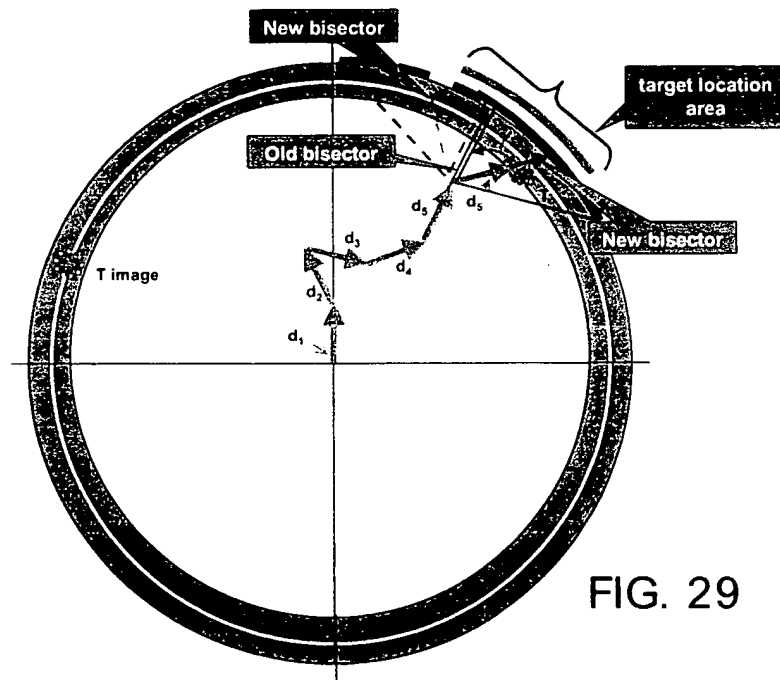


FIG. 29

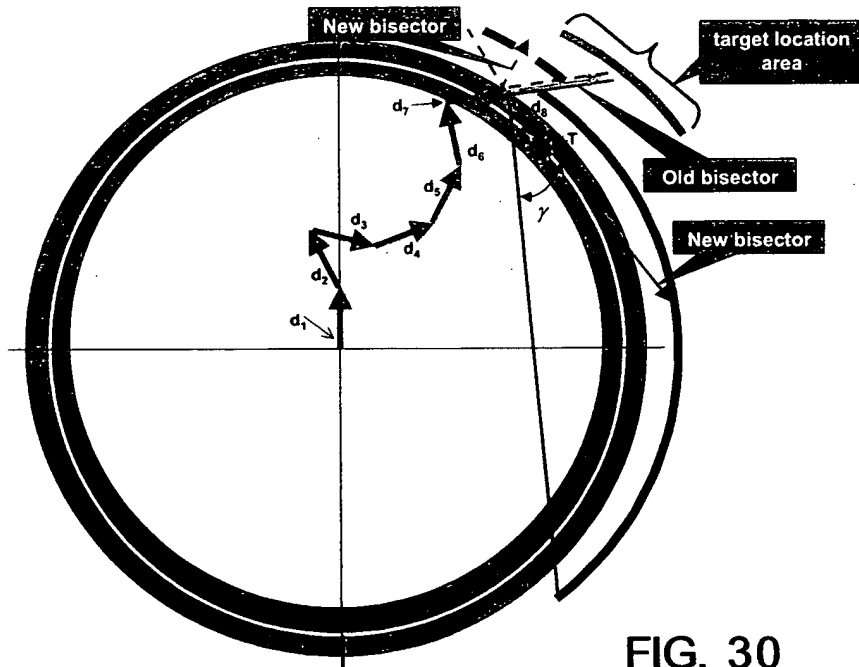
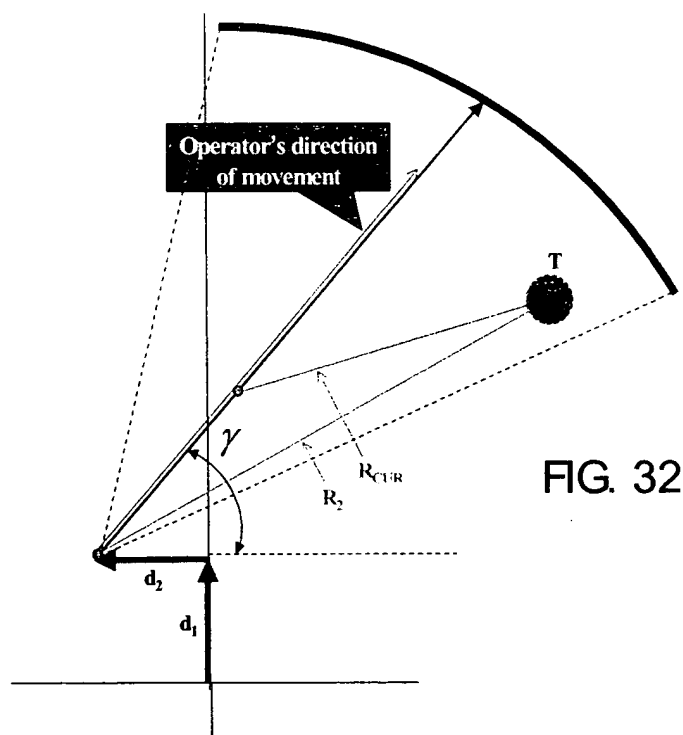
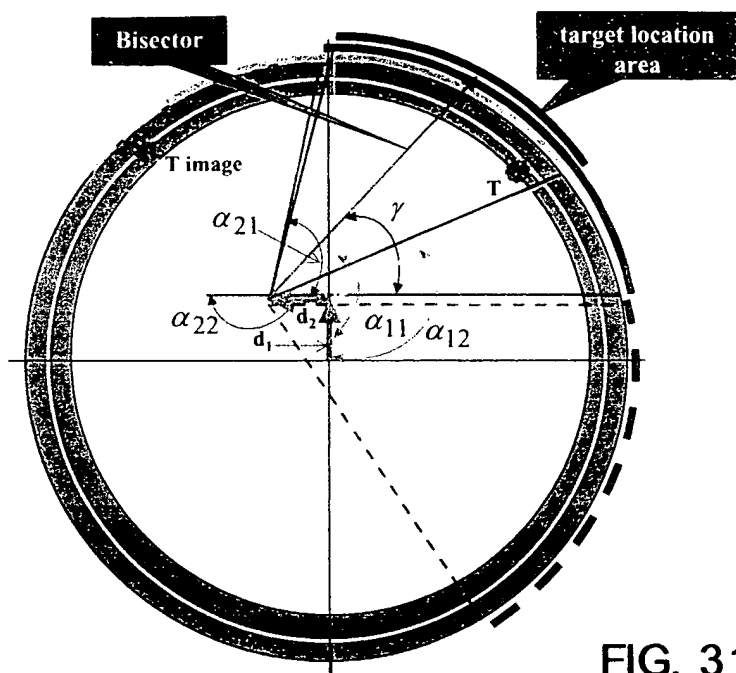


FIG. 30



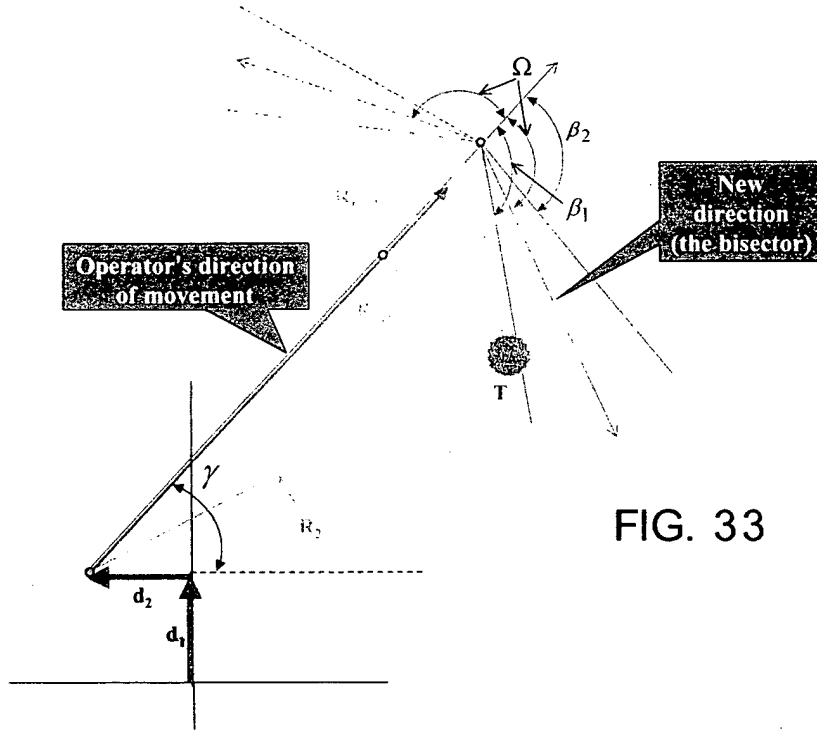


FIG. 33

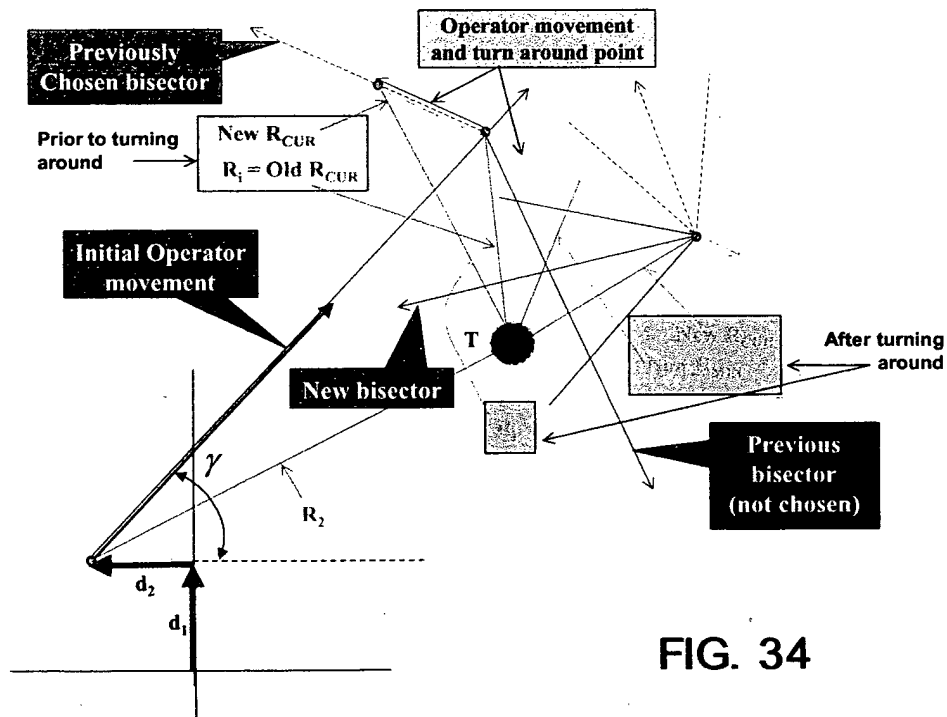


FIG. 34

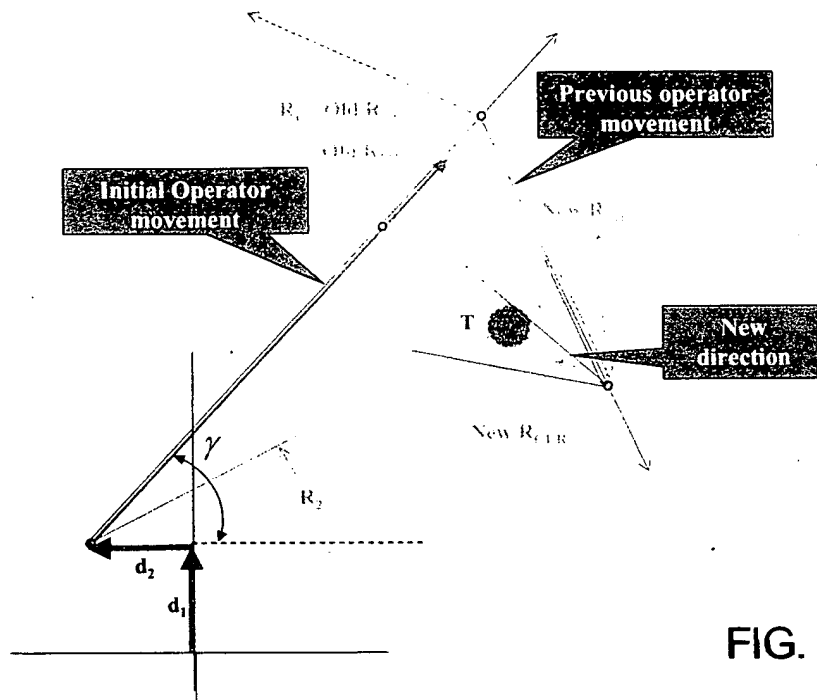


FIG. 35

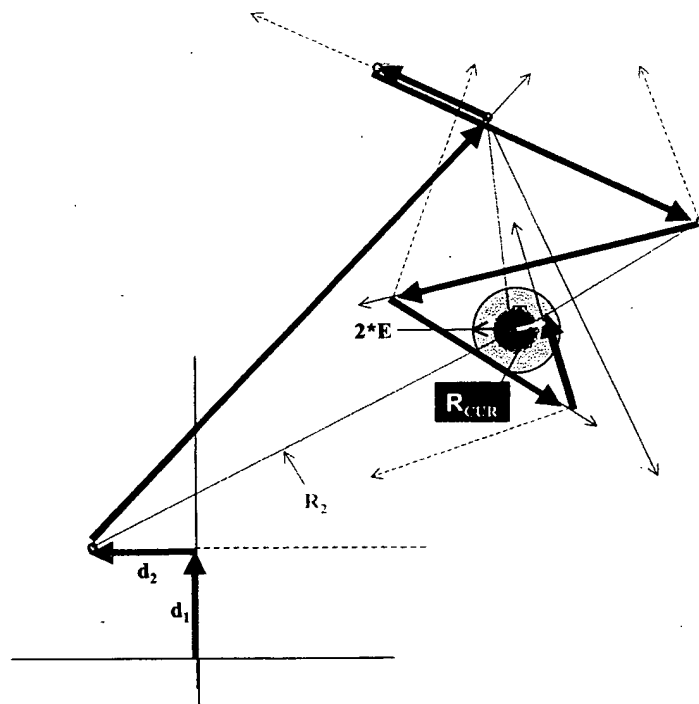


FIG. 36

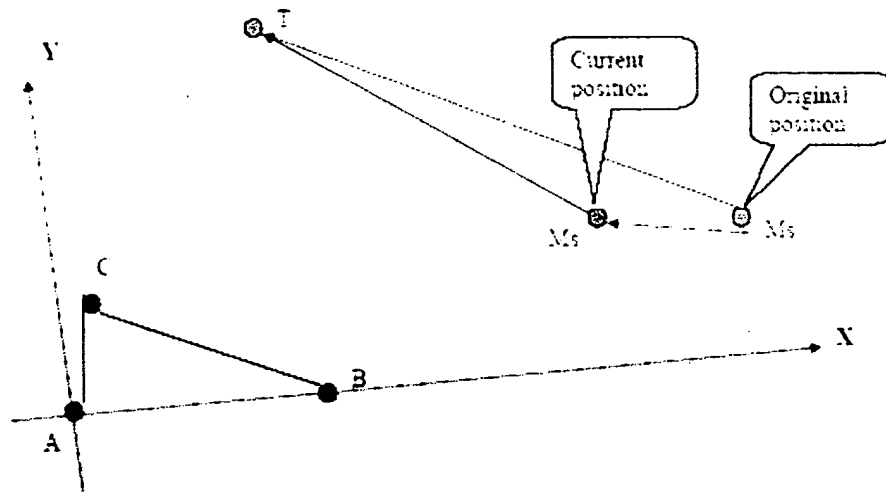


FIG. 38A

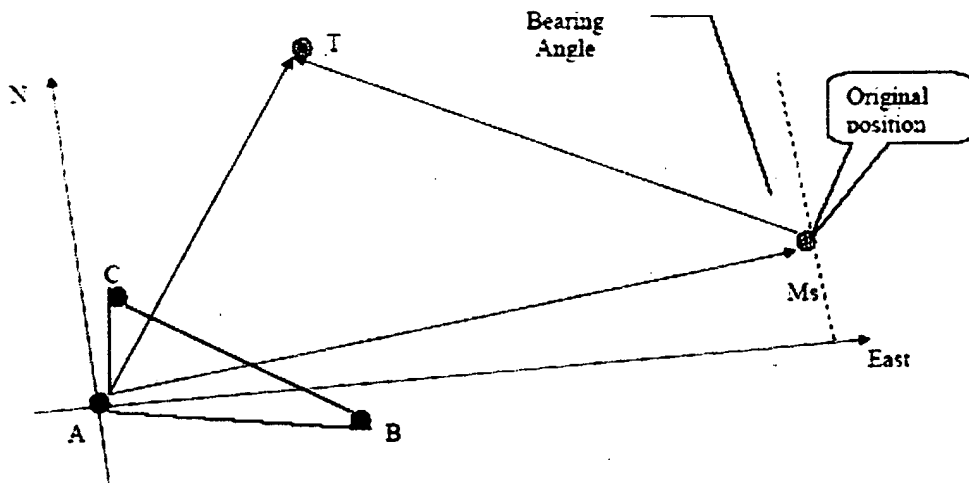


FIG. 38B

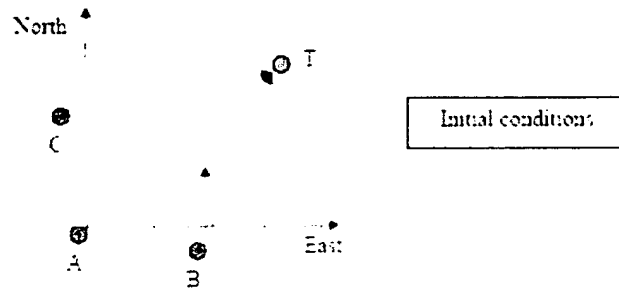


FIG. 39A

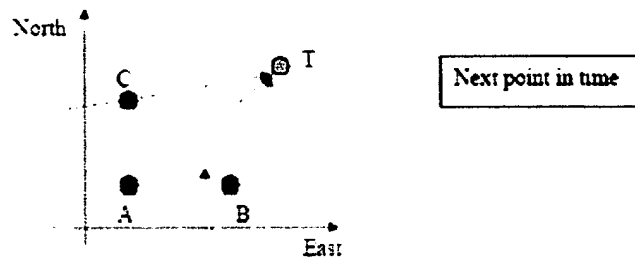


FIG. 39B

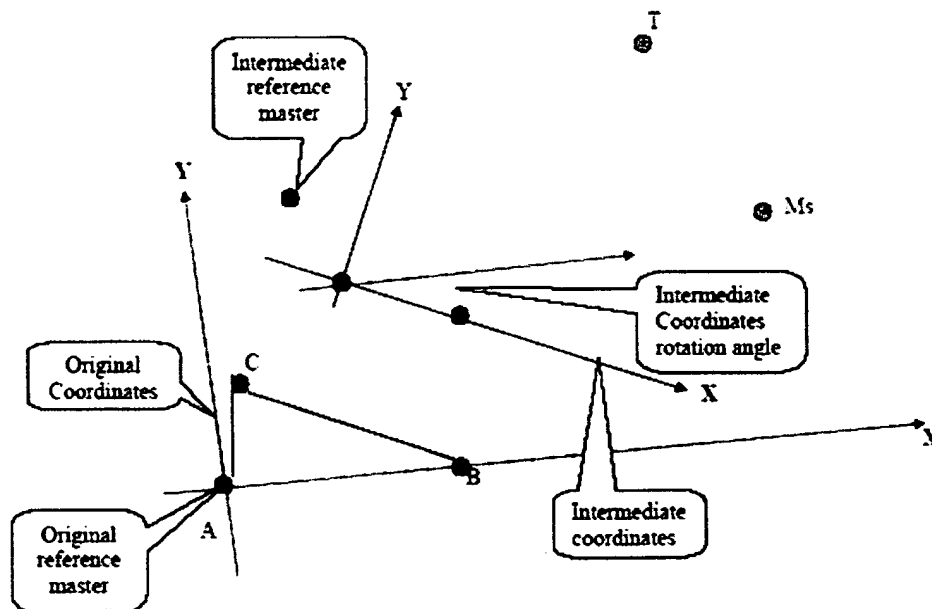


FIG. 40